



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

JAN 30 2008

EPA Region 5 Records Ctr.



286146

REPLY TO THE ATTENTION OF  
RRG Clayton Chemical Site - Soils

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

RRG/CLAYTON CHEMICAL SITE PRP Group  
c/o: Sharon R. Newlon, Esq.  
Dickinson Wright, PLLC  
500 Woodward Avenue, Suite 4000  
Detroit, MI 48226

Re: Second Amendment to October 27, 2005 Administrative Settlement Agreement and Order on Consent for Removal Action for the RRG/Clayton Chemical Soils Site, Sauget, IL (No. V-W-05-C-829)

Dear Madam:

Enclosed please find an executed copy of the Second Amendment to the October 27, 2005, Administrative Settlement Agreement and Order on Consent for Removal Action for the above-referenced Site pursuant to Sections 104, 107 and 122 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. Sections 9604, 9607 and 9622. Thank you for your cooperation in this matter.

If you have any questions regarding this Amendment to the Administrative Settlement Agreement, please contact Tom Turner, Associate Regional Counsel, at 312/886-6613 or Kevin Turner, On-Scene Coordinator, at 618/997-0115.

Sincerely yours,

Richard C. Karl, Director  
Superfund Division

Enclosure

cc: State Agency Superfund Program Manager

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 5

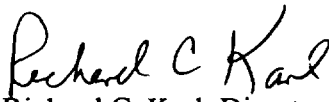
IN THE MATTER OF:	)	Docket No. V W 05-C-829
	)	
RESOURCE RECOVERY GROUP/	)	ADMINISTRATIVE SETTLEMENT
CLAYTON CHEMICAL SITE	)	AGREEMENT AND ORDER ON
Sauget, Illinois	)	CONSENT FOR REMOVAL ACTION
	)	Proceeding Under Sections 104, 107 and
Respondents:	)	122 of the COMPREHENSIVE
	)	ENVIRONMENTAL, RESPONSE,
Listed in Attachments A & B	)	COMPENSATION, AND LIABILITY
	)	ACT, as amended, 42 U.S.C. §§ 9604,
	)	9607 and 9622

SECOND AMENDMENT TO ADMINISTRATIVE SETTLEMENT  
AGREEMENT AND ORDER ON CONSENT FOR REMOVAL  
ACTION PURSUANT TO SECTIONS 104, 107 and 122 OF THE  
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION,  
AND LIABILITY ACT, as amended, 42 U.S.C. §§ 9604, 9607 and 9622

The Administrative Settlement Agreement and Order on Consent ("Order"), U.S. Environmental Protection Agency ("U.S. EPA") Docket No. V W 05-C-829, issued on 10-27-05 under Sections 104, 107 and 122 of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9604, 9607 and 9622, is hereby modified as follows:

ORDER i) Attachments A & B of the Order shall be amended to include additional performing and nonperforming members of this Order as identified in the attachments A & B;  
ii) In addition the Order shall be amended to include the attached Work Plan Amendment:

This Second Amendment to the Resource Recovery Group/Clayton Chemical Site Administrative Settlement Agreement and Order on Consent is hereby incorporated into the Order as if it were originally a part of the Order; all terms, conditions, and stipulations of the Order shall apply to this Second Amendment.

By:   
Richard C. Karl, Director  
Superfund Division  
U.S. Environmental Protection Agency  
Region 5

IN THE MATTER OF:

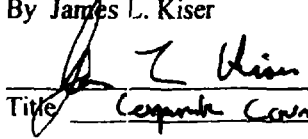
Resource Recovery Group/Clayton Chemical Site (soil)  
1 Mobile Avenue, Sauget, Illinois

The undersigned representative of Respondent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the party they represent to this document.

Agreed this: 21<sup>st</sup> day of July, 2006.

For Respondent Rexam Beverage Can Company

By James L. Kiser

  
\_\_\_\_\_  
Title Corporate Counsel

IN THE MATTER OF:

Resource Recovery Group/Clayton Chemical Site (soil)  
1 Mobile Avenue, Sauget, Illinois

The undersigned representative of Respondent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the party they represent to this document. *B P Products North America, Inc.*

Agreed this 19 day of September, 2006.

For Respondent

By: *[Signature]*

Title: Regional Manager *JMM*

**Attachment A**  
**Performing Members of the PRP Group**  
**Amended July 2007**

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Afton Chemical Corporation  
Allied Healthcare Products, Inc.  
American Recreation Products, Inc.  
ADM (Archer Daniels Midland)  
Anheuser-Busch Company, Inc.  
    including affiliates St. Louis Refrigerator Car Co., and Metal Container Corporation  
Arris International, Inc.  
Baker Petrolite Corporation  
Bemis Company Inc.  
Cerro Flow Products, Inc.  
Chemisphere Corporation  
Chicago Drum, Inc.  
Conopco, Inc.(Cheseborough Ponds)  
Crown Holdings Inc., .  
    including Crown Cork & Seal Co., Inc., and Continental Can Co. (f/k/a Crown Beverage Packaging, Inc.)  
Curwood Inc.  
DaimlerChrysler Corporation  
Dow Chemical Company (The)  
ExxonMobile Oil Corporation  
Ford Motor Company  
The Glidden Company  
Hussman Corporation  
Illinois Central Railroad Company  
    f/k/a Illincis Gulf Central Railroad/ Gulf, Mobile & Ohio Railroad  
INX International Ink Company  
Koch Industries, Inc.  
Lear Corporation  
    including United Technologies  
Lincoln Industrial Corporation  
Mallinckrodt Inc.  
Marchem Corporation  
McIntyre Group, LTD  
Mitsubishi Motors North America, Inc.  
Nascote Industries, Inc.  
National Coatings Inc.  
Nordenia/M&W Packaging  
Norfolk Southern Railway Company  
Olin Corporation  
Penn Aluminum International, Inc.  
Precoat Metals (Sequa Corporation)  
Rexam Beverage Can Company  
Riley Brothers Co  
Sterling Lacquer Manufacturing Company  
Superior Oil Co.  
Teva Pharmaceuticals  
    including BioCraft Labs  
Tnemec Company, Inc.  
U.S. Paint Corporation  
Valentec Wells, LLC  
Walker Paducah Corp

**Attachment B**  
**Non-Performing Members of the PRP Group**  
**Amended July 2007**

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Agfa Corporation, as parent and successor to Lastra Amercia Corp.  
Alberici Constructors, Inc. f/k/a Alberici Construction Company  
American Greetings Corp.,  
Aramark Uniform & Career Apparel  
    including Aratex Services, Inc. and Todd, Inc.  
Associated Electric Cooperative, Inc. (AECI)  
BASF Corporation  
Bachman Machine Co.  
Basler Electric Co.  
Bell Sports, Inc.  
The Boeing Co.  
    including McDonnell Douglas  
BP Products North America Inc.  
Brewer Science Inc.  
Carlisle Syntec Inc.  
ChemCentral Midwest Corporation  
Chevron Environmental Management Company for itself and on behalf of Chevron USA, Inc.  
Clean The Uniform Company St. Louis f/k/a Clean Coverall Supply Co., Inc.  
CNH America LLC as alleged successor to DMI  
Cooper US, Inc. (Bussman)  
Crane Co.  
Elementis Chemicals Inc  
    including Thompson Hayward Chemical Co/Harcros Chemicals  
EnPro Industries, Inc.  
Esco Technologies  
Fort Transfer Co.  
Gardner Denver, Inc.  
General Motors Corporation  
Hallmark Cards, Inc.  
Heritage Environmental Services, L.L.C.  
Illinois Tools Works Inc. (Diagraph)  
Interlake Material Handling, Inc.  
The Grigoleit Company  
The Knapheide Mfg. Co.  
Komatsu American International Co.  
Komatsu Mining Systems, Inc.  
LHB Industries  
Lastra Amercia Corporation  
Masterchem Brands, Inc.  
MeadWestvaco Consumer Packaging Group, LLC f/k/a AGI Incorporated  
The Meramec Group  
Mid States Paint  
Morton Metalcraft  
Nashua Corporation  
Nooter Corporation  
P D George Company  
Parsons Company  
Pechiney Plastic Packaging Inc.  
Perma Fix Environmental Services  
Polyone Corp., Successor to Dennis Chemical Co.

## WORK PLAN AMENDMENT

### 1.0 INTRODUCTION

#### 1.1. GENERAL

The following is an Amendment to the Work Plan that describes those activities that are being conducted to address the presence of mixed PCBs and characteristic hazardous wastes in the excavated soils and the containment of on-site soils within the central processing area at the Site as shown on **Amendment Exhibit 1**. The Group will be treating the excavated soils for VOCs and lead, as appropriate, and disposing of the stockpiles according to their remaining TSCA profile. This Amendment necessarily impacts the following sections of the Work Plan: Section 4.0 - Excavation Activities, Section 5.0 - Removal Action Closeout activities, and Section 7.0 - Project Schedule.

### 2.0 AMENDMENTS

#### 2.1. EXCAVATION ACTIVITIES - SOIL TREATMENT

The soils from the excavation activities completed at the site have been stockpiled. Initial disposal samples collected from the stockpiles demonstrated that stockpiles #2 through #6 had analytical results of VOCs above TCLP levels and PCBs above TSCA disposal thresholds. Stockpile 2 also had TCLP levels of lead above the RCRA disposal threshold. Stockpile #1 had neither VOCs nor PCBs and has already been properly disposed of off-site. Stockpile #7 contained no VOCs above TCLP levels, but did contain PCBs. See Table 1.

Based upon updated sampling, as shown in Table 2, Stockpiles 2, 4 and 5C will be treated, as necessary, for VOC components using chemical oxidation, as described below. Stockpile 2 will also undergo lead stabilization prior to disposal, as described below. It is estimated that approximately 1000 tons (700 cubic yards (yd<sup>3</sup>)) of soil will undergo chemical oxidation and/or lead stabilization. Soils with VOCs and lead below the TCLP levels for those constituents, including both treated materials and the remaining stockpiles on-site, will be shipped off-site in accordance with Work Plan Section 3.6.6 to a TSCA approved landfill. The stockpiles are currently underlain by plastic. Loading of the stockpiles for treatment and disposal will include some limited scraping of soils underlying the plastic, as is customary. No further excavation of on-site soils will be conducted. Further soil sampling will be limited to sampling of treated, stockpiled soils to confirm the adequacy of their treatment, as described in sections 2.1.1 and 2.1.2, below.

##### 2.1.1 Chemical Oxidation

The chemical oxidation treatment process will take place within four mix boxes of 40 yd<sup>3</sup> capacity each. For each batch, 25 yd<sup>3</sup> of soil will be loaded into each mix box for processing. The oxidizing reagent (potassium permanganate) will be added to each batch of soils simultaneously with water, the soils will be mixed, and then the 4 soil batches will be staged into a single covered stockpile on plastic for overnight reaction. Processing time within the mix boxes for each batch is estimated at two and one-half hours. Following

overnight reaction time, samples will be collected from the staging piles for TCLP analysis for all RCRA TCLP VOCs. Analysis of the samples is estimated to be complete within 3-4 days. Following confirmation of treatment to below applicable TCLP levels, the soils will be loaded for disposal. Appropriate measures will be taken to control material during the transfer process for treatment. During the various soil loading processes, a fine water mist will be used, as necessary, to control dust. During the chemical addition and mixing processes, the addition of water will be necessary to facilitate oxidation, so the soils will be kept moist.

#### 2.1.2 - Lead Stabilization

The lead stabilization process will be conducted in place at the location of Stockpile #2. A reagent, Enviroblend, a mixture of magnesium oxide and calcium phosphates, will be added to the pile and mixed in as it is added. A fine water mist will be directed onto the stockpile during the addition of the reagent. Following thorough mixing, samples will be collected and analyzed for TCLP lead. Analysis of the samples is estimated to be complete within 3-4 days. Following confirmation of adequate stabilization, the soils will be treated for VOCs via chemical oxidation, as described in section 2.1.1., above.

### 2.2. PROJECT SCHEDULE FOR SOIL TREATMENT

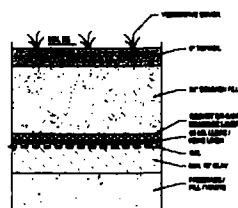
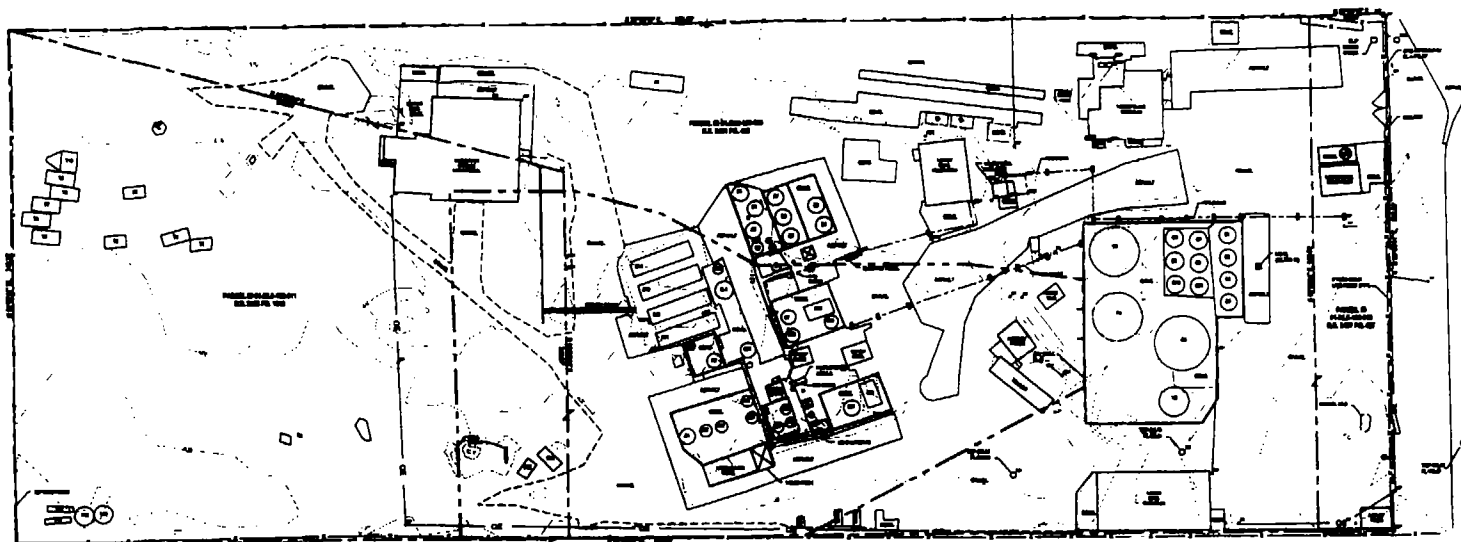
Treatment of the soil has begun. The on-site treatment and off-site shipment of the soils and backfilling of the site is anticipated to continue for approximately eight (8) weeks, assuming that once through treatment of the stockpiled soils will be adequate and that weather conditions will be amenable to the treatment technology. The need for further treatment or poor weather conditions may extend this schedule. Please note that this project timeline is based on an assumed waste shipment rate of 250 tons per day (10 trucks each with 25 tons). The availability of approved waste hauling vehicles and the ability to schedule and load those vehicles on a consistent basis throughout the project has the ability to affect the project timeline.

### 2.3. REMOVAL ACTION CLOSEOUT - CAP INSTALLATION

EPA intends to issue a Unilateral Administrative Order to pursue certain recalcitrant parties for construction of a cap and implementation of a cap operations and maintenance ("O&M") plan at the Site. EPA will utilize its enforcement authorities under that Order to assure performance of the required cap construction and O&M activities. However, EPA retains its enforcement discretion in all matters involving removal actions at the Site. The PRP Group will not be relieved of such responsibility, and in the event the other parties fail to perform some or all of the cap construction and O&M plan, EPA may seek to hold the PRP Group responsible for any outstanding cap obligations.

A notice of completion of work will be issued by the OSC following completion of construction of the cap and approval of the O&M plan.





TYPICAL CAP CROSS-SECTION  
RTA

NO	Symbol	Notes	Rev

- LEGEND**
- CABLE SERVICE BOX
  - CABLE
  - ELECTRICAL SERVICE BOX
  - FAUCET
  - FIRE HYDRANT
  - GAS BOX
  - GAS VALVE
  - GROUND
  - LIGHT STANDARD
  - MAIL BOX
  - MAN
  - MANHOLE
  - RIG HOSE PIPE
  - POWER POLE
  - RIG HOSE
  - PIPE BRIDGE FOUNDATION
  - RIG HOSE
  - WATER METER
  - SMALL NAT PITS IN PROCESS AREA
  - NAT PIT
  - APPROXIMATE CAP LINE

#### SCALE VERIFICATION

THIS DRAWING IS TO BE USED AS A GUIDE ONLY.

#### DRAWING STATUS

NO	Symbol	Notes	Rev

RRG CLAYTON CHEMICAL SITE  
SAUGET, ILLINOIS

PROPOSED CAP AREA LAYOUT



Source Reference			
PERMISSION SURVEYING, LLC FILE #31007 DATED 12/16/05			
Report Manager	Reviewed by	Date	
GB	CRA	october 2005	
Scale	Project #	Report #	Drawing #
1" = 40'	42192-05	MEMO001	C-0

Amendment Exhibit 1

TABLE 1

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRG/CLAYTON) SITE SOLIDS REMOVAL ACTION ANALYTICAL RESULTS SOIL STOCKPILE WASTE CHARACTERIZATION SAMPLES											
	RCRA Toxic Concentration/TSCA Threshold										
Sample Date		3/24/2006	3/31/2006	3/31/2006	4/4/2006	4/10/2006	4/10/2006	4/10/2006	4/10/2006	4/10/2006	4/10/2006
Sample Time		1430	1100	1200	1600	1600	1410	1420	1900	1830	1000
New Sample ID		Stockpile #1	Stockpile #2	Stockpile #3	Stockpile #4	Stockpile #5	Stockpile #5B	Stockpile #5C	Stockpile #6	Stockpile #6B	Stockpile #7
New Sample Depth											
PID Reading											
Parameter											
TCLP Metals											
Arsenic	5.0	NA	0.013	0.0052	0.005	ND	NA	NA	ND	NA	ND
Barium	100.0	NA	0.96	1.2	0.44	0.91	NA	NA	1.5	NA	0.84
Cadmium	1.0	NA	0.045	0.23	0.079	0.1	NA	NA	0.18	NA	0.045
Chromium	5.0	NA	0.05	0.087	0.019	0.031	NA	NA	0.087	NA	ND
Lead	5.0	NA	18	1.2	1.1	0.31	NA	NA	1.5	NA	0.43
Selenium	1.0	NA	0.0044	0.0056	ND	ND	NA	NA	ND	NA	ND
Silver	5.0	NA	0.0027	ND	0.017	ND	NA	NA	ND	NA	ND
Mercury	0.2	NA	ND	0.00015	ND	ND	NA	NA	ND	NA	ND
PCBs											
Aroclor 1016		ND	ND	ND	ND	NA	ND	ND	NA	ND	ND
Aroclor 1221		ND	ND	ND	ND	NA	ND	ND	NA	ND	ND
Aroclor 1232		ND	ND	ND	ND	NA	ND	ND	NA	ND	ND
Aroclor 1242		1.2	50	2400	20	NA	510	360	NA	95	33
Aroclor 1248		ND	ND	ND	ND	NA	ND	ND	NA	ND	ND
Aroclor 1254		0.95	40	680	33	NA	220	77	NA	25	13
Aroclor 1260		0.48	11	ND	21	NA	ND	43	NA	31	17
Total	50	2.63	101	3080	74	NA	730	480	NA	155	63

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRC/CLAYTON) SITE SOLIDS REMOVAL ACTION ANALYTICAL RESULTS SOIL STOCKPILE WASTE CHARACTERIZATION SAMPLES											
	RCRA Toxic Concentration/TSCA Threshold										
Sample Date		3/24/2006	3/31/2006	3/31/2006	4/4/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006
Sample Time		1430	1100	1200	1600	1600	1410	1620	1300	1830	1600
New Sample ID		Stockpile #1	Stockpile #2	Stockpile #3	Stockpile #4	Stockpile #5	Stockpile #5B	Stockpile #5C	Stockpile #6	Stockpile #6B	Stockpile #7
New Sample Depth											
FID Reading											
Parameter											
TCLP SEMI-VOLATILE ORGANIC COMPOUNDS											
2,4,5-Trichlorophenol	400.0	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
2,4,6-Trichlorophenol	2.0	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
2,4-Dinitrotoluene	0.13	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
2-Methylphenol	200.0	NA	0.0074	ND	NA	ND	NA	NA	0.02	NA	ND
3/4 Methylphenol	400.0	NA	0.024	0.008	NA	ND	NA	NA	0.075	NA	0.025
Hexachlorobenzene	0.13	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
Hexachlorobutadiene	0.5	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
Hexachlorocyclopentadiene	3.0	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
Nitrobenzene	2.0	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
Pentachlorophenol	100.0	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
Pyridine	5.0	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRG/CLAYTON) SITE  
SOLIDS REMOVAL ACTION ANALYTICAL RESULTS  
SOIL STOCKPILE WASTE CHARACTERIZATION SAMPLES

	RCRA Toxic Concentration/TSCA Threshold										
Sample Date		3/24/2006	3/31/2006	3/31/2006	4/6/2006	4/14/2006	4/14/2006	4/14/2006	4/14/2006	4/19/2006	4/19/2006
Sample Time		1430	1100	1200	1600	1600	1410	1420	1900	1830	1600
New Sample ID		Stockpile #1	Stockpile #2	Stockpile #3	Stockpile #4	Stockpile #5	Stockpile #5B	Stockpile #5C	Stockpile #6	Stockpile #6B	Stockpile #7
New Sample Depth											
PID Reading											
Parameter											
TCLP VOLATILE ORGANIC COMPOUNDS											
1,1-Dichloroethene	1.7	NA	0.34	ND	0.44	ND	NA	NA	ND	NA	ND
1,2-Dichloroethene	0.5	NA	4.3	ND	2.0	ND	NA	NA	0.04	NA	ND
1,4-Dichlorobenzene	7.5	NA	0.96	3.5	1.0	1.20	NA	NA	4.0	NA	3.1
Benzene	0.5	NA	6.4	0.17	3.6	0.05	NA	NA	1.5	NA	0.07
Carbon Tetrachloride	0.5	NA	ND	ND	ND	ND	NA	NA	ND	NA	ND
Chlorobenzene	100.0	NA	3.1	3.0	3.0	0.51	NA	NA	11	NA	0.84
Chloroform	6.0	NA	6.8	ND	3.9	ND	NA	NA	0.01	NA	0.03
Methyl ethyl ketone	200.0	NA	1.6	ND	1.6	ND	NA	NA	0.69	NA	0.057
Tetrachloroethene	0.7	NA	3.1	2.7	2.2	0.74	NA	NA	1.7	NA	0.02
Trichloroethene	0.5	NA	45	6.4	29	0.56	NA	NA	2.2	NA	0.036
Vinyl chloride	0.2	NA	ND	ND	ND	ND	NA	NA	ND	NA	ND
TCLP PESTICIDES											
Chlordane	0.003	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
Endrin	0.020	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
gamma-BHC	0.4	NA	ND	0.001	NA	ND	NA	NA	ND	NA	ND
Heptachlor	0.008	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
Heptachlor epoxide	0.008	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
Methoxychlor	10.0	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
Toxaphene	0.5	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRG/CLAYTON) SITE SOLIDS REMOVAL ACTION ANALYTICAL RESULTS SOIL STOCKPILE WASTE CHARACTERIZATION SAMPLES											
	RCRA Toxic Concentration/TSCA Threshold										
Sample Date		3/24/2006	3/31/2006	3/31/2006	4/6/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006
Sample Time		1430	1100	1200	1400	1400	1430	1430	1900	1830	1400
New Sample ID		Stockpile #1	Stockpile #2	Stockpile #3	Stockpile #4	Stockpile #5	Stockpile #5B	Stockpile #5C	Stockpile #6	Stockpile #6B	Stockpile #7
New Sample Depth											
FID Reading											
Parameter											
<b>TCDF HERBICIDES</b>											
2,4,5-TP	1.0	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
2,4-D	10.0	NA	ND	ND	NA	ND	NA	NA	ND	NA	ND
<b>GENERAL CHEMISTRY</b>											
Cyanide		ND	1.0	4.1	0.7	6.8	NA	NA	7.0	NA	3.5
Reactive Sulfide		4.4	3.3	9.8	7.1	ND	NA	NA	ND	NA	ND
Phenolics		1.0	11	25	30	25	NA	NA	45	NA	16
Palm Filter Test		ND	ND	ND	ND	PASS	NA	NA	PASS	NA	PASS
pH		6.9	6.4	6.8	6.4	7.0	NA	NA	7.3	NA	7.2
Ignitability		>60	NA	NA	NA	>60	NA	NA	>60	NA	>60
Extractable Organic Halides		ND	150	780	640	445	NA	NA	1,500	NA	2,200
Percent Moisture		11	NA	NA	NA	10.3	11.7	11.1	11.9	13.8	10.0

**Notes:**

1. All concentrations are reported in parts per million.
2. Analytical data shown is from samples collected during 2005-06 Removal Action efforts.
3. Analytical data shown is being evaluated against the IEPA Soil Remediation Objectives for Commercial/Industrial Properties, Construction Worker values (IEPA Construction Workers SROs).
4. IEPA Construction Workers SROs (column B) are bolded and italicized for emphasis.
5. Shaded cells are to indicate specific compounds from 2001 Site Assessment that exceeded the evaluation standard (the EPA Region 9 Preliminary Remediation Goals (PRGs)).
6. Shaded and bolded cells represent data that exceeded the IEPA Construction Worker SRO.
7. NR means data was requested but not reported.
8. Blank cells means data was neither requested nor reported.
9. ND means the analyte was not detected.

TABLE 2

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RUG/CLAYTON) SITE SOLIDS REMOVAL ACTION ANALYTICAL RESULTS STOCKPILE SAMPLES									
	RCRA Toxic Concentration/TSCA Threshold								
Sample Date		6/1/2006	6/1/2006	6/1/2006	6/1/2006	6/1/2006	6/1/2006	6/1/2006	6/1/2006
Sample Time		1625	1445	1405	1500	1300	1515	1515	1405
Stockpile #		Stockpile #2	Stockpile #3	Stockpile # 4/10	Stockpile #5	Stockpile #10	Stockpile #5C	Stockpile #6	Stockpile #7
Sample ID		S-002106-GD-008	S-002106-GD-001	S-002106-GD-007	S-002106-GD-002	S-002106-GD-009	S-002106-GD-003	S-002106-GD-012	S-002106-GD-011
No. of Sample Aliquots		8	14	12 (8 from 4, 4 from 10)	6	4 (2 from each sub-pile)	6	16	16
Parameter									
TCDF Metals									
Arsenic	5.0	NA	NA	NA	NA	NA	NA	NA	NA
Barium	100.0	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	1.0	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	5.0	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	5.0	NA	NA	NA	NA	NA	NA	NA	NA
Copper	1.0	NA	NA	NA	NA	NA	NA	NA	NA
Lead	5.0	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	1.0	NA	NA	NA	NA	NA	NA	NA	NA
Silver	5.0	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.2	NA	NA	NA	NA	NA	NA	NA	NA
PCBs									
Aroclor 1180		ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1221		ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1232		ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242		15	170	72	37	601	240	5.8	ND
Aroclor 1248		ND	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254		20	201	27	97	401	92	5.0	1.7
Aroclor 1260		ND	ND	ND	ND	ND	ND	5.7	ND
Total	50.0	15	1500	99	154	1120	382	16.5	1.7
Original Totals		101	3000	74	NA	730	060	155	60
Original Sample Aliquots		12	16	12	10	12	10	mean = 26.68 - 12 (TCB only)	12
TCDF SEMI-VOLATILE ORGANIC COMPOUNDS									
2,4,5-Trichlorophenol	600.0	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	2.0	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	0.12	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	200.0	ND	ND	ND	ND	ND	ND	ND	ND
3,4-Methylphenol	600.0	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.13	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	0.5	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclohexene	3.0	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	2.0	ND	ND	ND	ND	ND	ND	ND	ND
Polychlorophenol	100.0	ND	ND	ND	ND	ND	ND	ND	ND
Perchloro	5.0	ND	ND	ND	ND	ND	ND	ND	ND

**RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRG/CLAYTON) SITE  
SOLIDS REMOVAL ACTION ANALYTICAL RESULTS  
STOCKPILE SAMPLES**

	RCRA Toxic Concentration/TSCA Threshold								
Sample Date		6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006
Sample Time		1625	1445	1405	1500	030	1515	925	905
Stockpile #		Stockpile #2	Stockpile #3	Stockpile # 4/10	Stockpile #5	Stockpile #5B	Stockpile #5C	Stockpile #6	Stockpile #7
Sample ID		S-062206-CD-000	S-062206-CD-001	S-062206-CD-002	S-062206-CD-003	S-062206-CD-004	S-062206-CD-005	S-062206-CD-012	S-062206-CD-011
No. of Sample Aliquots		8	14	12 (8 from 4, 4 from 005)	6	4 (2 from each sub-pile)	6	16	16
<b>TOTAL SEMIVOLATILE ORGANIC COMPOUNDS</b>									
Benzene		ND	ND	ND	0.22	ND	0.63	ND	ND
Acetone		ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane		5.7	2.4	180	1.3	5.7	35	21	ND
Fluoranthene		2.2	ND	2.3	0.44	ND	2.4	1.8	ND
Pyrene		3.7	0.72	6.1	0.54	ND	2.4	1.2	1.3
Benzyl benzoate		ND	ND	ND	ND	ND	2.2	ND	ND
3,3'-Dibenzodioxole		ND	ND	ND	ND	ND	ND	ND	ND
Benzodioxole		1.1	ND	1.1	0.21	ND	1.2	ND	ND
Chrysene		2.1	0.47	1.0	0.41	ND	1.7	1.4	1.1
N-2-Ethylbenzylphthalate		62	180	ND	26	14	210	110	17
Dichlorophthalate		ND	ND	ND	ND	ND	ND	ND	ND
Benzophenanthrene		1.7	ND	ND	0.28	ND	1.5	ND	ND
Benzophenanthrene		1.5	ND	ND	0.26	ND	1.1	ND	ND
Benzophenone		1.3	ND	ND	0.24	ND	1.1	ND	ND
Anthracene 1,2,3-trimethyl		ND	ND	ND	ND	ND	0.62	ND	ND
Dibenzodioxole		ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone		ND	ND	ND	ND	ND	0.5	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol		ND	ND	ND	ND	ND	ND	ND	ND
Dibenzodioxole		ND	ND	ND	ND	ND	0.48	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND
Dichlorophthalate		ND	ND	ND	ND	ND	ND	ND	ND
Fluorene		ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether		ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol		ND	ND	ND	ND	ND	ND	ND	ND
4-Nitro-2-methylphenol		ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosophenylamine		ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl phenyl ether		ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND
Atrazine		ND	ND	ND	ND	ND	ND	ND	ND
Perchlorophenol		ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene		1.9	ND	11	0.12	ND	1.7	5.2	0.95
Naphthalene		ND	0.66	5.8	0.16	ND	11	12	ND
2,4,6-Trinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND
Carbazole		ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-1-methylphenol		ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene		ND	ND	2.5	0.1	ND	1.1	1.6	ND
Hexachlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND
1,1'-Biphenyl		ND	ND	ND	ND	ND	ND	1.4	ND

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRG/CLAYTON) SITE SOLIDS REMOVAL ACTION ANALYTICAL RESULTS STOCKPILE SAMPLES									
	RCRA Toxic Concentration/TSCA Threshold	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/22/2006	6/21/2006	6/22/2006	6/22/2006
Sample Date		6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/22/2006	6/21/2006	6/22/2006	6/22/2006
Sample Time		1625	1603	1606	1500	030	1515	025	008
Stockpile #		Stockpile #2	Stockpile #3	Stockpile # 4/5/6	Stockpile #5	Stockpile #5B	Stockpile #6C	Stockpile #6	Stockpile #7
Sample ID		S-002106-GD-008	S-002106-GD-001	S-002206-GD-007	S-002106-GD-002	S-002206-GD-009	S-002106-GD-003	S-002206-GD-012	S-002206-GD-011
No. of Sample Aliquots		6	14	17 (8 from 4, 4 from 5/6)	6	4 (2 from each sub-pile)	6	16	16
2-Chloromethanol		ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline		ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate		ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrochlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND
Acetylphenol		ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline		ND	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde		ND	ND	ND	ND	ND	ND	ND	ND
Phenol		ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol		ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol		ND	ND	ND	ND	ND	ND	ND	ND
2,2'-methylenebis(4-chlorophenol)		ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile		ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene propylene		ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene		ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene		ND	ND	ND	ND	ND	ND	ND	ND
Isophenol		0.26	2.3	48	0.62	ND	3.0	2.4	ND
2-Nitrophenol		ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol		ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND
Total SVOCs (mg/kg)		64.36	186.55	179.1	35.6	19.7	266.1	364	15.95
Site Spill Volume - max (tons)		350	250	800	200	100	100	650	225
Site Spill Volume - max (kg)		117,515	226,796	562,374	181,437	90,718	90,718	569,670	204,117
Mass SVOCs (kg)		27	62	65	6.46	1.8	24	226	3
Mass SVOCs (tons)		0.030	0.067	0.072	0.007	0.002	0.027	0.250	0.003
TCMP VOLATILE ORGANIC COMPOUNDS									
1,1-Dichloroethane	1.7	ND	ND	0.011	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.5	0.0051	ND	0.13	ND	ND	ND	ND	ND
1,1-Dichloroethylene	7.5	0.39	0.33	0.73	0.08	1.6	1.8	2.3	1.3
Benzene	0.5	0.047	0.013	0.18	ND	ND	0.046	0.091	ND
Carbon Tetrachloride	0.5	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	100.0	0.13	0.11	0.99	0.013	0.18	1.2	2.7	0.021
Chloroform	6.0	0.0096	ND	0.19	ND	ND	ND	ND	0.0057
Methylene dichloride	200.0	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahaloethene	0.7	0.51	0.20	1.1	0.12	0.14	0.97	0.40	0.0062
Trichloroethene	0.5	0.33	0.32	3.7	0.016	0.26	0.63	0.18	ND
Vinyl chloride	0.2	ND	ND	ND	ND	ND	ND	ND	ND
Total		1.42	1.273	7.831	0.229	2.16	4.646	5.801	0.035



**RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRC/CLAYTON) SITE  
SOLIDS REMOVAL ACTION ANALYTICAL RESULTS  
STOCKPILE SAMPLES**

	RCRA Toxic Concentration/TSCA Threshold								
Sample Date		6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006
Sample Time		1625	1605	1605	1600	030	1515	035	060
Stockpile #		Stockpile #2	Stockpile #3	Stockpile # QRB	Stockpile #5	Stockpile #6B	Stockpile #5C	Stockpile #6	Stockpile #7
Sample ID		S-062106-CD-008	S-062106-CD-001	S-062106-CD-007	S-062106-CD-002	S-062106-CD-009	S-062106-CD-003	S-062106-CD-002	S-062106-CD-001
No. of Sample Aliquots		8	14	12 (8 from 6, 4 from 08)	6	4 (2 from each sub-pile)	6	16	16
<b>TOTAL VOLATILE ORGANIC COMPOUNDS</b>									
A.romo-		ND	ND	ND	ND	ND	0.09	ND	ND
B.romo-		1.2	0.43	ND	ND	ND	1.7	3.7	ND
Bromoethylenethane		ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene		ND	ND	ND	ND	ND	ND	ND	ND
Bromonitrobenzene		ND	ND	ND	ND	ND	ND	ND	ND
2-Bromotoluene		ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide		ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride		ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene		6.6	6.1	40	0.85	9.6	27000	120	0.14
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	4.0	ND	ND	ND	ND	ND
Chloroformethane		ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane		ND	ND	ND	ND	ND	ND	ND	ND
Dibromomethane		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1-dimethylpropane		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene		45	28	61	3.9	210	6000	250	0.1
1,4-Dichlorobenzene		1.7	2.4	1.5	0.99	5.8	4.9	7.2	0.62
1,4-Dichlorobenzene		45	39	91	9.4	190	8000	280	56
Dichlorodifluoromethane		ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	0.61	0.66	ND
1,2-Dichloroethane		ND	ND	2.1	ND	ND	ND	ND	ND
cis-1,2-Dichloroethane		4.7	11	1.6	7.6	2.0	5.2	2.1	ND
trans-1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND
Diethylbenzene		1.8	ND	18	ND	0.66	12	6.3	ND
2-Ethyltoluene		ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene		0.44	ND	1.9	ND	ND	2.7	1.1	ND
Methyl acetate		ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane		ND	ND	ND	ND	ND	ND	ND	ND
Methylcyclopentane		ND	ND	ND	ND	ND	ND	ND	ND
1-Methyl-2-pentanol		ND	ND	ND	ND	ND	ND	ND	ND
Methyl isopropyl ether		ND	ND	ND	ND	ND	ND	ND	ND
Styrene		ND	0.35	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrafluoroethane		2.5	28	21	6.4	21	60	8.1	0.65
Tetrafluoroethane		51	48	85	11	11	4000	16	ND
Toluene		7.4	ND	47	ND	ND	17	13	ND
1,2,4-Trichlorobenzene		19	28	39	19	58	19	21	120
1,1,1-Trichloroethane		6.1	19	57	2	0.94	21	12	ND
1,1,2-Trichloroethane		1.3	0.45	16	ND	ND	0.47	ND	0.14

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRG/CLAYTON) SITE									
SOLID REMOVAL ACTION ANALYTICAL RESULTS									
STOCKPILE SAMPLES									
	RCRA Toxic Concentration/TSCA Threshold								
Sample Date		6/11/2006	6/11/2006	6/11/2006	6/11/2006	6/11/2006	6/11/2006	6/22/2006	6/22/2006
Sample Time		1425	1445	1455	1500	1530	1515	925	905
Stockpile #		Stockpile 02	Stockpile 03	Stockpile 0 (P18)	Stockpile 05	Stockpile 05B	Stockpile 05C	Stockpile 06	Stockpile 07
Sample ID		S-062106-CD-008	S-062106-CD-001	S-062106-CD-007	S-062106-CD-002	S-062106-CD-009	S-062106-CD-003	S-062106-CD-012	S-062106-CD-011
No. of Sample Aliquots		6	94	12 (8 from 6, 4 from 008)	6	4 (2 from each sub-pile)	6	16	16
Tin Inorganic		14	15	110	0.96	15	34	9.8	ND
Tin Inorganic (sum)		ND	ND	ND	ND	ND	ND	ND	ND
Tri-2-Tributyl 1,1,2-Trifluoroethane		ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride		ND	ND	ND	ND	ND	ND	ND	ND
Xylenes		22	ND	65	ND	1.4	61	27	ND
Total VOCs (mg/kg)		764.64	211.83	665.3	43.62	516	214279.99	793.96	157.95
Site Aque Volume - max (L/min)		750	250	400	200	100	100	630	225
Site Aque Volume - max (kg)		317.315	226.796	362.874	181.337	90.718	90.718	599.679	204.117
Aque VOCs (kg)		68	48	234	7.91	67	18.639	672	53
Aque VOCs (L/min)		0.075	0.053	0.258	0.099	0.062	21.638	0.538	0.056
TCDF-PESTICIDES									
Chlordane	0.003	NA	NA	NA	NA	NA	NA	NA	NA
Endrin	0.020	NA	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	0.4	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.006	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	0.006	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	10.0	NA	NA	NA	NA	NA	NA	NA	NA
Toxaphene	0.5	NA	NA	NA	NA	NA	NA	NA	NA
TCDF-HERBICIDES									
2,4,5-TP	1.0	NA	NA	NA	NA	NA	NA	NA	NA
2,4-D	10.0	NA	NA	NA	NA	NA	NA	NA	NA
GENERAL CHEMISTRY									
Chromate		NA	NA	NA	NA	NA	NA	NA	NA
Hexavalent Sulfate		NA	NA	NA	NA	NA	NA	NA	NA
Phenoxide		NA	NA	NA	NA	NA	NA	NA	NA
Potential Free Test		NA	NA	NA	NA	NA	NA	NA	NA
pH		NA	NA	NA	NA	NA	NA	NA	NA
Specificity		NA	NA	NA	NA	NA	NA	NA	NA
Extractable Organic Halides		NA	NA	NA	NA	NA	NA	NA	NA
Dry Weight Moisture			15	12	10.0	10.0	12.0	8.9	15

#### Notes

1. All concentrations are reported in parts per million.
2. Analytical data shown is from samples collected during 2005-06 Remedial Action efforts.
3. Analytical data shown is being evaluated against the RCRA Toxicity thresholds, and TSCA threshold values.
4. Evaluation standards (column B) are listed for emphasis.
5. A dash (-) in column B indicates that no evaluation threshold was found.
6. Bolded cells represent data that exceeded the applicable evaluation threshold value.
7. NA means data was not analyzed for.
8. Blank cells means data was neither requested nor reported.
9. ND means the analyte was not detected.

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRG/CLAYTON) SITE								
SOLIDS REMOVAL ACTION ANALYTICAL RESULTS								
STOCKPILE SAMPLES								
	RCRA Toxic Concentration/TSCA Threshold							
Sample Date		4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006
Sample Time		1325	1335	1350	040	030	045	000
Stockpile #		Stockpile # CP-CP4	Stockpile # CC	Stockpile # TP-04/CC	Stockpile # TP-54	Stockpile # CP-30	Stockpile # TP-34/TP-35	Stockpile # TP-47
Sample ID		S-002106-CD-001	S-002106-CD-005	S-002106-CD-006	S-002106-CD-010	S-002106-CD-013	S-002106-CD-014	S-002106-CD-015
Nr. of Sample Aliquots		3	1	6	2	2	5	2
Parameter								
TCLP Metals								
Antimony	5.0	NA	NA	NA	NA	NA	NA	NA
Barium	100.0	NA	NA	NA	NA	NA	NA	NA
Cadmium	1.0	NA	NA	NA	NA	NA	NA	NA
Chromium	5.0	NA	NA	NA	NA	NA	NA	NA
Cuad	5.0	NA	NA	NA	NA	NA	NA	NA
Selenium	1.0	NA	NA	NA	NA	NA	NA	NA
Silver	5.0	NA	NA	NA	NA	NA	NA	NA
Mercury	0.2	NA	NA	NA	NA	NA	NA	NA
PCBs								
Anticler 1016		ND	ND	ND	ND	ND	ND	ND
Anticler 1221		ND	ND	ND	ND	ND	ND	ND
Anticler 1232		ND	ND	ND	ND	ND	ND	ND
Anticler 1242		1.1	0.09	ND	ND	64	ND	ND
Anticler 1248		ND	ND	ND	ND	ND	ND	ND
Anticler 1254		1.1	ND	ND	4.1	10	0.37	0.002
Anticler 1304		ND	ND	ND	ND	14	ND	ND
Total	50.0	2.4	0.09	ND	4.4	128	0.57	0.002
Original Totals								
Original Sample Aliquots								
TCLP SEMI-VOLATILE ORGANIC COMPOUNDS								
2,4-Dichlorophenol	400.0	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	2.0	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	0.13	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	200.0	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	400.0	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.13	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	0.5	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3.0	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	2.0	ND	ND	ND	ND	ND	ND	ND
Phenylketone	100.0	ND	ND	0.011	ND	ND	ND	ND
Pyridine	5.0	ND	ND	ND	ND	ND	ND	ND

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRC/CLAYTON) SITE								
SOLIDS REMOVAL ACTION ANALYTICAL RESULTS								
STOCKPILE SAMPLES								
	RCRA Toxic Concentration/TCA Threshold							
Sample Date		8/21/2006	8/21/2006	8/21/2006	8/21/2006	8/21/2006	8/21/2006	8/21/2006
Sample Time		1535	1536	1558	040	939	955	999
Stockpile #		Stockpile # GP-MCP-6	Stockpile # GC	Stockpile # TP-50/OC	Stockpile # TP-54	Stockpile # GP-58	Stockpile # TP-14/TP-15	Stockpile # TP-47
Sample ID		S-082106-GD-004	S-082106-GD-085	S-082106-GD-086	S-082106-GD-010	S-082106-GD-013	S-082106-GD-014	S-082106-GD-015
No. of Sample Aliquots		3	2	6	2	2	8	2
TOTAL SEMI-VOLATILE ORGANIC COMPOUNDS								
Benzonaphthylene		0.13	ND	ND	0.094	ND	0.04	0.27
Anthracene		ND	3.5	2.9	0.017	ND	ND	ND
Carbazole		ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate		0.2	ND	ND	0.16	ND	0.1	0.044
Fluoranthene		0.75	7.8	4.8	0.24	ND	0.058	0.1
Pyrene		1.3	12	17	0.27	ND	0.09	0.26
Butyl benzyl phthalate		ND	ND	ND	ND	ND	0.007	ND
3,3'-Dibenzofuran		ND	ND	ND	ND	ND	ND	ND
Benzofluoranthene		0.49	4.4	7.6	0.12	ND	ND	0.24
Chrysene		0.71	9.1	13	0.18	ND	0.095	0.13
Indol-2-Ethylbenzylphthalate		2.6	4.5	2.2	0.29	0.36	0.5	0.79
Di-n-butyl phthalate		ND	ND	ND	ND	ND	ND	ND
Benzofluoranthene		0.76	ND	2.6	0.13	ND	0.067	0.39
Benzofluoranthene		0.6	ND	1.4	0.11	ND	0.044	0.29
Benzofluoranthene		0.69	ND	2.5	0.11	ND	0.043	0.3
Indeno(1,2,3-cd)pyrene		0.44	ND	0.79	0.094	ND	ND	0.29
Dibenzofluoranthene		ND	ND	ND	ND	ND	ND	0.11
Acenaphthene		ND	0.91	ND	ND	ND	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol		ND	ND	ND	ND	ND	ND	ND
Dibenzofuran		ND	ND	ND	0.036	ND	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND
Dibenzofuran		ND	ND	ND	ND	ND	ND	ND
Fluorene		ND	0.81	ND	ND	ND	ND	ND
4-Chlorophenyl phenyl ether		ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol		ND	ND	ND	ND	ND	ND	ND
1,4-Dinitro-2-methylphenol		ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine		ND	ND	ND	ND	ND	ND	ND
4-Bromodiphenyl ether		ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene		ND	ND	ND	ND	ND	ND	ND
Atrazine		ND	ND	ND	ND	ND	ND	ND
Permethrinophenol		ND	ND	ND	ND	ND	ND	ND
Phenanthrene		0.25	1.4	2.9	0.2	ND	0.05	0.11
Naphthalene		ND	ND	ND	0.009	ND	0.039	ND
1-Chloronaphthalene		ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene		ND	ND	ND	ND	ND	ND	ND
Carbazole		ND	ND	ND	ND	ND	ND	ND
4-Chloro-1-methylphenol		ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene		ND	1.7	1.1	0.33	ND	ND	ND
Hexachlorobenzene		ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND
1,1'-Biphenyl		ND	ND	ND	0.04	ND	ND	ND

Total VOCs

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRC/CLAYTON) SITE								
SOLIDS REMOVAL ACTION ANALYTICAL RESULTS								
STOCKPILE SAMPLES								
	RCRA Toxic Concentration/TSCA Threshold							
Sample Date	4/23/2006	4/23/2006	4/23/2006	4/23/2006	4/23/2006	4/23/2006	4/23/2006	4/23/2006
Sample Time	1535	1535	1535	1535	1535	1535	1535	1535
Stockpile #	Stockpile # GP-5/CP-4	Stockpile # CC	Stockpile # TP-59/CC	Stockpile # TP-54	Stockpile # CP-30	Stockpile # TP-34/TP-25	Stockpile # TP-47	
Sample ID	S-002195-CD-004	S-002196-CD-005	S-002196-CD-008	S-002196-CD-010	S-002196-CD-013	S-002196-CD-014	S-002196-CD-015	
No. of Sample Aliquots	3	2	6	2	2	6	2	
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	
2,6-Dimethylnaphthalene	ND	ND	ND	ND	ND	ND	ND	
2,8-Dimethylnaphthalene	ND	ND	ND	ND	ND	ND	ND	
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	
1-Naphthol	ND	ND	ND	ND	ND	ND	ND	
Benzothiazole	ND	ND	ND	ND	ND	ND	ND	
Phenol	ND	ND	ND	ND	ND	ND	ND	
trans-2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	
2-Methylphenol	ND	ND	ND	ND	ND	ND	ND	
2,2'-methylenebis(1-Chlorophenol)	ND	ND	ND	ND	ND	ND	ND	
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	
Nitrobenzobenzofuran	ND	ND	ND	ND	ND	ND	ND	
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND	
Thiophene	ND	ND	ND	ND	ND	0.14	ND	
2-Nitrothiophene	ND	ND	ND	ND	ND	ND	ND	
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	
trans-2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	
Total SVOCs (mg/kg)	9.22	77.4	78.79	2.526	78.79	9.363	3.16	
Sample Volume - max. (L)	30	75	112.5	7.5	12	120	15	
Sample Volume - max. (kg)	27.216	68.875	102.038	6.875	10.886	108.862	13.608	
Mean SVOCs (kg)	0.251	5.368	0.691	0.017	0.658	1.091	0.043	
Mean SVOCs (L)	0.0003	0.0056	0.0009	0.000191	0.000953	0.001126	0.0000475	
TCMP VOLATILE ORGANIC COMPOUNDS								
1,1-Dichloroethene	1.7	ND	ND	ND	ND	ND	ND	
1,2-Dichloroethene	0.5	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethane	7.5	0.024	0.054	0.028	0.026	0.023	0.012	0.0151
Benzene	0.5	ND	0.0013	0.0042	ND	ND	ND	ND
Carbon Tetrachloride	0.5	ND	ND	ND	ND	ND	ND	ND
Chloroform	100.0	ND	ND	ND	ND	0.0071	0.007	ND
Chlorobenzene	6.8	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone	200.0	ND	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	0.7	0.59	0.019	0.30	ND	ND	0.0009	ND
Trichloroethene	0.5	0.018	0.013	0.003	ND	ND	0.016	ND
Vinyl chloride	0.2	ND	ND	ND	ND	ND	ND	ND
Total		0.632	0.084	0.315	0.036	0.034	0.0439	0.0851

Total VOCs

0.0099

0.45

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRG/CLAYTON) SITE  
SOLIDS REMOVAL ACTION ANALYTICAL RESULTS  
STOCKPILE SAMPLES

	ECRA Toxic Concentration/TSCA Threshold							
Sample Date		8/21/2006	8/21/2006	8/21/2006	8/21/2006	8/21/2006	8/21/2006	8/21/2006
Sample Time		1525	1535	1539	1549	1530	1555	1600
Stockpile #		Stockpile # GP-5/CP-4	Stockpile # GC	Stockpile # TP-30/OC	Stockpile # TP-54	Stockpile # CP-29	Stockpile # TP-14/TP-35	Stockpile # TP-47
Sample ID		S-002105-CD-004	S-002106-CD-005	S-002106-CD-006	S-002106-CD-010	S-002106-CD-013	S-002106-CD-014	S-002106-CD-015
No. of Sample Aliquots		3	2	6	2	2	6	2
TOTAL VOLATILE ORGANIC COMPOUNDS								
Acetone		ND	0.44	ND	ND	0.055	0.004	0.14
Benzene		ND	ND	ND	0.33	0.019	0.014	ND
Bromochloromethane		ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane		ND	ND	ND	ND	ND	ND	ND
Bromotrichloromethane		ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	0.047	0.0045	ND
Chloroacetaldehyde		ND	ND	ND	ND	ND	ND	ND
Chloroacetaldehyde hydrate		ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	0.26	ND	ND	ND	0.0022	ND
Chloromethane		ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	0.014	0.00174	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND
Cyclohexane		ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-1,1-dichloroethane		ND	ND	ND	ND	ND	ND	ND
1,2-Dibromodichloroethane		ND	ND	ND	ND	ND	ND	ND
1,3-Dibromodichloroethane		0.59	0.51	ND	0.077	ND	0.0391	ND
1,3-Dibromodichloroethane		ND	ND	ND	ND	ND	ND	ND
1,4-Dibromodichloroethane		1.2	5.4	2.4	0.11	0.018	0.0096	ND
Dibromodichloromethane		ND	ND	ND	ND	ND	ND	ND
1,1-Dibromodichloroethane		ND	ND	ND	ND	ND	ND	ND
1,2-Dibromodichloroethane		ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dibromodichloroethane		0.16	ND	1.4	ND	0.032	0.0128	ND
trans-1,2-Dibromodichloroethane		ND	ND	ND	ND	ND	ND	ND
1,1-Dibromodichloroethane		ND	ND	ND	ND	ND	ND	ND
1,2-Dibromodichloroethane		ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dibromodichloroethane		ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dibromodichloroethane		ND	ND	ND	ND	ND	ND	ND
Ethylbenzene		0.53	ND	ND	0.13	ND	0.002	ND
1,2-Hexanediol		ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene		ND	ND	ND	0.13	ND	ND	ND
Methyl acetate		ND	ND	ND	ND	ND	ND	ND
Methyl chloroform		ND	ND	ND	ND	0.012	0.018	ND
Methyl cyclohexane		ND	ND	ND	ND	ND	ND	ND
1-Methyl-2-pyrrolidone		ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether		ND	ND	ND	ND	ND	ND	ND
Styrene		ND	ND	ND	ND	ND	ND	0.056
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane		39	2.0	7.1	ND	0.12	0.009	1.6
1,1-Dichloroethane		0.76	ND	0.32	0.76	0.2	0.016	ND
1,2-Trichloroethane		ND	6.0	1.8	ND	ND	ND	ND
1,1-Trichloroethane		1.9	1.1	2.2	ND	0.12	0.0071	0.051
1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND

RESOURCE RECOVERY GROUP/CLAYTON CHEMICAL COMPANY (RRG/CLAYTON) SITE								
SOLID REMOVAL ACTION ANALYTICAL RESULTS								
STOCKPILE SAMPLES								
	RCRA Toxic Concentration/TSCA Threshold							
Sample Date		6/7/2006	6/7/2006	6/7/2006	6/22/2006	6/22/2006	6/22/2006	6/22/2006
Sample Time		1325	1325	1300	060	030	055	080
Stockpile #		Stockpile # CP-5/CP-4	Stockpile # OC	Stockpile # TP-50/OC	Stockpile # TP-54	Stockpile # CP-20	Stockpile # TP-24/TP-25	Stockpile # TP-47
Sample ID		S-002106-GD-004	S-002106-GD-005	S-002106-GD-006	S-002106-GD-010	S-002106-GD-013	S-002106-GD-014	S-002106-GD-015
No. of Sample Aliquots		3	2	6	2	2	6	2
Trichloroethene		1.4	0.48	2.5	ND	0.2	0.015	0.027
Trichloroethene/ethane		ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethene		ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND
Xylenes		1.1	ND	ND	1.0	0.019	0.0075	ND
Total VOCs (mg/kg)		68.66	16.21	10.82	1.207	0.026	0.00361	1.02
Soxaphene Volume - mass (grams)		0	75	112.5	7.5	12	120	15
Soxaphene Volume - mass (kg)		27.216	16.039	102.068	6.804	10.008	100.062	13.608
Mass VOCs (kg)		1.330	1.003	2.021	0.008	0.010	0.010	0.026
Mass VOCs (tons)		0.0015	0.0012	0.0022	0.0000091	0.0000105	0.0000111	0.0000266
TCDF-PESTICIDES								
Chlordane	0.001	NA	NA	NA	NA	NA	NA	NA
Endrin	0.001	NA	NA	NA	NA	NA	NA	NA
gamma-BHC	0.4	NA	NA	NA	NA	NA	NA	NA
Heptachlor	0.008	NA	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	0.008	NA	NA	NA	NA	NA	NA	NA
Isodrin	0.0	NA	NA	NA	NA	NA	NA	NA
Toxaphene	0.5	NA	NA	NA	NA	NA	NA	NA
TCDF-HERBICIDES								
2,4-D	1.0	NA	NA	NA	NA	NA	NA	NA
2,4-D	10.0	NA	NA	NA	NA	NA	NA	NA
GENERAL CHEMISTRY								
Chloride		NA	NA	NA	NA	NA	NA	NA
Free H <sub>2</sub> S Sulfide		NA	NA	NA	NA	NA	NA	NA
Phenols		NA	NA	NA	NA	NA	NA	NA
Potential Free Test		NA	NA	NA	NA	NA	NA	NA
pH		NA	NA	NA	NA	NA	NA	NA
Synthetic		NA	NA	NA	NA	NA	NA	NA
Extractable Organic Halides		NA	NA	NA	NA	NA	NA	NA
Percent Moisture		7.8	11	6.8	5	21	7.6	6.3

Total VOCs

20,373.10

22.66

## Notes:

- All concentrations are reported in parts per million.
- Analytical data shown is from samples collected during 2015 On Removal Action efforts.
- Analytical data shown is being evaluated against the RCRA Toxicity thresholds and TSCA threshold values.
- Evaluation standards (column B) are listed for comparison.
- A dash (-) in column B indicates that no evaluation threshold was found.
- Blank cells represent data that exceeded the applicable evaluation threshold value.
- NA means data was not analyzed for.
- Blank cells means data was neither requested nor reported.
- ND means the analyte was not detected.

## DRAFT

RRG/Clayton Chemical Site  
 Sauget, St. Clair County, Illinois  
 Field Sample Key  
 Stockpile Re-characterization/Soil Milling Field Trial

Sample Dates: August 21-23, 2006

Date	Time	Sample Identification	Location	PID Readings (ppm) (Highest Reading from Composite)	Comments
<b>Soil Characterization Samples</b>					
8/21/2006	1445	S-082106-GD-001	Stockpile #3	N/A	Sample composite of 16 sample locations within stockpile.
8/21/2006	1500	S-082106-GD-002	Stockpile #5	N/A	Sample composite of 6 sample locations within stockpile.
8/21/2006	1515	S-082106-GD-003	Stockpile #5C	N/A	Sample composite of 2 sample locations within stockpile.
8/21/2006	1525	S-082106-GD-004	Stockpile #GP-5/GP-6	N/A	Sample composite of 3 sample locations within stockpile.
8/21/2006	1535	S-082106-GD-005	Stockpile #GC	N/A	Sample composite of 2 sample locations within stockpile.
8/21/2006	1550	S-082106-GD-006	Stockpile #T50/GC	N/A	Sample composite of 6 sample locations within stockpile.
8/21/2006	1605	S-082106-GD-007	Stockpile #4/4B	N/A	Sample composite of 12 sample locations within stockpile.
8/21/2006	1625	S-082106-GD-008	Stockpile #2	N/A	Sample composite of 8 sample locations within stockpile.
8/22/2006	0830	S-082206-GD-009	Stockpile #5B	N/A	Sample composite of 4 sample locations within stockpile.
8/22/2006	0840	S-082206-GD-010	Stockpile #TP-54	N/A	Sample composite of 2 sample locations within stockpile.
8/22/2006	0905	S-082206-GD-011	Stockpile #7	N/A	Sample composite of 16 sample locations within stockpile.
8/22/2006	0925	S-082206-GD-012	Stockpile #6	N/A	Sample composite of 16 sample locations within stockpile.
8/22/2006	0930	S-082206-GD-013	Stockpile #TP-20	N/A	Sample composite of 2 sample locations within stockpile.
8/22/2006	0955	S-082206-GD-014	Stockpile #TP-24/TP-25	N/A	Sample composite of 8 sample locations within stockpile.
8/22/2006	1010	S-082206-GD-015	Stockpile #47	N/A	Sample composite of 3 sample locations within stockpile.



DRAFT

RRG/Clayton Chemical Site  
Sauget, St. Clair County, Illinois  
Field Sample Key  
Stockpile Re-characterization/Soil Milling Field Trial

Sample Dates: August 21-23, 2006

Date	Time	Sample Identification	Location	PID Readings (ppm) (Highest Reading from Composite)	Comments
<b>Soil Milling Samples</b>					
8/22/2006	1410	S-082206-GD-016	Stockpile #3	363.4	Pre-Milling Sample from composite of approximately 8-12 Cubic Yards
8/22/2006	1442	S-082206-GD-017	Stockpile #3- Post Treat	112.7	Post treatment sample
8/22/2006	1510	S-082206-GD-018	Stockpile #5	14.4	Pre-Milling Sample from composite of approximately 8-12 Cubic Yards
8/22/2006	1544	S-082206-GD-019	Stockpile #5 - Post Treat	6.8	Post treatment sample
8/22/2006	1610	S-082206-GD-020	Stockpile #4	290	Pre-Milling Sample from composite of approximately 8-12 Cubic Yards
8/22/2006	1628	S-082206-GD-021	Stockpile #4- Post Treat Rnd 1	12.8	Post treatment sample
8/22/2006	1640	S-082206-GD-022	Stockpile #4- Post Treat Rnd 2	580	Post treatment sample
8/23/2006	0915	S-082306-GD-023	Stockpile #2	1668	Pre-Milling Sample from composite of approximately 8-12 Cubic Yards
8/23/2006	0930	S-082306-GD-024	Stockpile #2 - Post Treat Rnd 1	1068	Post treatment sample
8/23/2006	0955	S-082306-GD-025	Stockpile #2 - Post Treat Rnd 2	307	Post treatment sample
8/23/2006	1015	S-082306-GD-026	Stockpile #6	907	Pre-Milling Sample from composite of approximately 8-12 Cubic Yards
8/23/2006	1030	S-082306-GD-027	Stockpile #6 - Post Treat Rnd 1	1362	Post treatment sample
8/23/2006	1050	S-082306-GD-028	Stockpile #6 - Post Treat Rnd 2	301	Post treatment sample